GUITAR User's Guide

The construction of a guitar is extremely light, although it must bear the huge tension of the strings. The wooden structure is sensitive for changes in the air humidity. To enjoy your guitar for a long span, we recommend that you read this guide properly.

RETAINING THE GUITAR

A Guitar Box

To keep your guitar intact you should always keep it in a guitar box. A good box protects the instrument against external mechanical injury, moist and temperature variations. A good guitar box is often the best "insurance", to the fraction of the price of a new guitar. Avoid setting the head of the instrument so that it is in contact with the bottom of the box, but a bit loose from it. Tend to keep the guitar in the box even during short breaks.

A guitar stand

A guitar-stand is a good place to retain the guitar. If the guitar is leaning against for instance a wall, a table, or a chair, it may fall down, often with a broken neck as result.

Temperature

The guitar should be kept in normal room temperature (+18°C - +25°C or 64°F - 77°F). Steady temperature and humidity are ideal for the guitar. Avoid all warm and cold spots and rapid changes of temperature. Do not keep the guitar by a radiator, or close to other heaters. Due to strong temperature differences, it is not recommended to leave the instrument by an outer wall. Do not leave the guitar in a car during summer time, as the temperature may rise to +50°C or 120°F. The glue does not bear the heat. If you must transport the guitar during the winter time, we recommend that you keep it in the box for 1 - 2 hours until opening the box. During extremely low temperature you should loosen the strings before taking the guitar outdoors.

Moisture

The air humidity can, depending on location and time, range from 70% - 20%. Most wooden guitars do not bear these wide-ranging variations. Wood is a hygroscopic material. If the relative humidity gets higher, the wood takes up the wetness from the air. When the air humidity is lower than the humidity of the wood, the wood evaporates the wetness back to the air. The dehydration may cause the top to crack or even bend the neck. When the seasonal-variations of the humidity is 60% or so, the top lives some tenths of a millimetre, which is enough to inflict cracks. It's important to pay attention to the humidity when preserving the guitar. Do not keep the instrument in a too moist or too dry place. An air saturator in the room is recommendable during winter time. Specially designed small saturators, for use inside the box, are also available. During the summer time the guitar should not be left outdoors or on the lawn.

The strings

Never use steel strings on a guitar designed for nylon-strings, or the opposite. Different types of guitars are designed for different use. A guitar designed for nylon-strings does not stand for the tension

caused by steel strings. Nylon-strings do not give out the natural tone on a guitar designed for steel strings.
Do not mount thicker strings than the manufacturer recommends. A 12-string guitar does not sound correct played with six strings, as the top and the structure are stiffer than on a guitar designed for six strings.
Always replace the complete set of strings. If you replace the strings just one by one, the sound will be unbalanced, as you mix old and new strings. Tune the guitar to a correct pitch. Tuning the instrument to an incorrect pitch may cause the neck to bend among others. Always use only high-class strings. Strings of poor quality loose the tone at an early date.

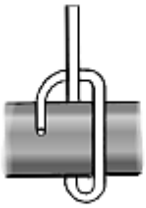
Cleaning the strings

Base strings may be cleaned by boiling, which removes the fat and may increase the service life of the strings a bit. The strings may also be cleaned with a cloth wet with alcohol.

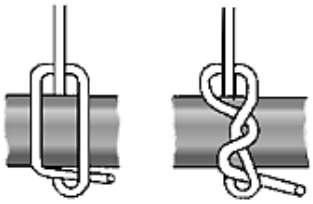
Replacing the strings

The strings should be replaced as often as possible, at least when the sound becomes poor or the guitar does not stay tuned anymore. The thinner the string is, the faster it gets out of tune. If you prefer thin strings, they should be replaced more frequently. The strings age even when the guitar is not used.
A tuning-crank, which speeds up the turning of the tuning pegs when replacing the strings, is of good use. A good tuning-crank contains a special key for loosening the string plugs on a steel-stringed guitar. Side-cutting pliers are required for cutting the strings.

Remove the old string and attach the new string into the bridge. The attachment of the strings is different on steel-stringed and nylon-stringed guitars. Do not press the string-plugs too deep in the holes in the bridge. See the string-mounting instructions for a classic guitar in the figures bellow. Do not leave the end of the strings too long at the bridge.
Tread the string through the hole in the bridge as shown in the figure.

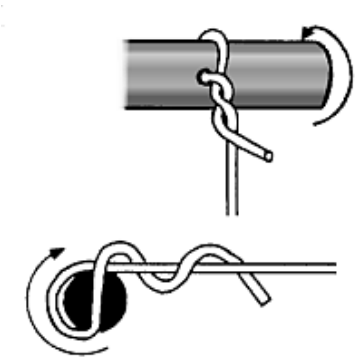


It is not necessary to bend the end of the bass string around the string, but the end of thinner strings should.

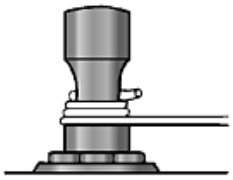


The strings are often 10 - 20 cm too long, but do not wound the loose around the tuning peg.

Tread the string through the hole in the tuning peg and tighten it. Turn the end around the string a few turns and cut of the loose end. The shorter the string is, the faster it starts keeping in tune.



The tuning peg on a steel-stringed guitar is turned thinner in the middle, making the thicker string's lock to the peg by themselves. Thread the string trough the hole and tighten it.



Attach the string so that the turns on the tuning peg run downwards, placing the last turn as close to the base of the peg as possible. Thereby the angle of the string directed towards the nut is biggest.

Playability

The playability of the guitar depends on many facts. When the string is pressed to the fretboard it constrains the pressure. The constrain depends on the height, the thickness and the tenseness of the string. The constrain is bigger, if the strings are high and thick, and the tension is high.

String adjustment

If the string rattles, check the neck and the top. If they are intact, the strings are too low. The height of the strings is set to a correct level while manufacturing the guitar, but may change due to the humidity. Therefore the Landola guitars are equipped with two different bridgebones, for use in different conditions.
If your guitar is equipped with onboard electronics in the bridge, you should let an instrument repairer do the work. Most problems concerning the functioning of bridge-microphones are related to failures while installing the bridgebone.

The height of the strings

Every player has his/her own opinion of the correct height of the strings. Some like the strings lower, others prefer them higher. Lower strings rattle easier. Another affecting factor is the playing style: silent/loud, use of a plectrum/finger picking etc. A good adjustment allows you to play clean, and allows you to use a slight rattle as an effect when wanted.

The strings are factory set on the following level:
Height of the string by the XII-fret:

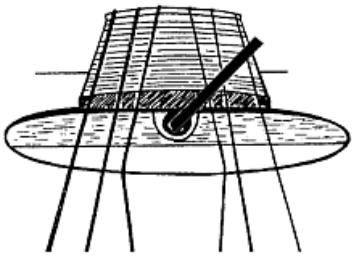
	Treble	Bass
Steel	2,5 mm	3,2 mm
Nylon	3,2 mm	4,0 mm

NOTE! The adjustment of the neck also affects the height of the strings.

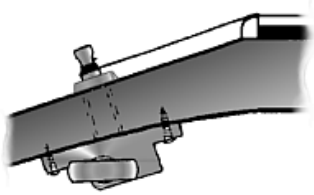
THE NECK

Adjusting the neck

If the neck of the guitar is not straight (actually it should be a bit curved) and it is equipped with an adjusting knob, do as follows: Loosen the middle strings. The neck-adjusting knob of the Landola guitar is located under the end of the fretboard. Attach the tool, that came with the guitar, to the adjusting knob, and turn it keeping an eye on the neck at the same time.



When turned clockwise, the neck-bar tightens, and the neck gets more curved. When loosening the bar, the neck bends the opposite way, due to the tension of the strings. Tune the guitar after the adjustment, and check which position the neck takes. Readjust the bar when needed.



The adjusting bar does not work correctly if the strings are removed, since it compensates the tension caused by the strings.

Tuning pegs

Lubricate the cogwheels of the tuning pegs every now and then, using thin oil, for instance sewing machine oil.

CLEANING THE GUITAR

You can clean the guitar using a lukewarm wet cloth. Guitar polish sold in music stores is also recommended. Dirt gathered on the fretboard may be removed using 000-steel wool, lightly rubbing in longitudinal direction.

SOME GOOD ADVICE

Inspect the top of the guitar occasionally. If it has risen more than 5 mm, the strings must be replaced with thinner ones, or the guitar must be taken for repair. Do not file the saddle notches yourself, as it requires experience, and is not as easy as it seems. If the frets of the fretboard are worn out, you should not try to replace them, if you are not fully aware of what you are doing. Take the guitar to a specialist if you are not sure. If the guitar is damaged, take it to a specialist for repair and adjustment, and you will enjoy it for a longer time. Please read the terms of warranty.